Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Energy Corporation of America
Well Name/Number: ECA Foothills 6D
Location: SW NW Section 24 T6S R17E
County: Carbon **, MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No,10 to 15 days drilling time.
Unusually deep drilling (high horsepower rig): No, medium depth drilling with a double derrick or a small triple derrick drilling rig, Will drill vertical hole stratigraphic well test to 6600' TD.
Possible H2S gas production: No, Sundance Formation at total depth.
In/near Class I air quality area: Near to a Class I air quality area, the Custer National Forest, about 0.625 miles to the south from this location.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:
Comments: No special concerns – using a small triple or double derrick drilling rig, Well to be drilled to 6600' TD, Sundance Formation.

Water Quality

(possible concerns)
Salt/oil based mud: No, freshwater and freshwater mud system.
High water table: No high water table anticipated.
Surface drainage leads to live water: Yes, closest drainages are unnamed ephemeral tributary to Morris Creek, about ½ of a mile to the south and about 3/8 of a mile to the north from this location.
Water well contamination: No, closest water wells are about 3/4 of a mile to the northeast and about 3/4 of a mile to the northwest from this location. Depth of these freshwater wells are 90'. Surface casing hole will be drilled with freshwater/freshwater drilling fluids to 452'. Steel surface casing will be run and cemented to surface from 452'. Main hole will be drilled with freshwater and freshwater mud to 6600' TD, Sundance Formation.
Porous/permeable soils: Yes, rocky gravelly weathered granite soils.
Class I stream drainage: Morris Creek may be a Class I stream. East Rosebud Creek is definitely a Class I stream drainage and Morris Creek is a tributary of it.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)

__ Other: _____

Comments: _452' of steel surface casing cemented to surface adequate will adequately protect freshwater zones. Also, fresh water mud system to be used to drill surface hole. Production casing will be cemented. Reserve pit is proposed to be lined with a 20 mil synthetic liner.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: _Yes will cross Morris Creek over existing bridge. Will cross at least one of the tributary ephemeral drainages to get to this location. I will assume that a culvert will be placed at this crossing.

High erosion potential: _No high erosion potential, small cut, up to 3.6', required and small fill, up to 5.8', required

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: _No, a large wellsite, 300'X200' location size required.

Damage to improvements: _Slight, surface use appears to be grazing land.

Conflict with existing land use/values: _None.

Mitigation

__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other: _____

Comments: _Access will be over existing county road, East Rosebud Road and existing ranch/well access road. About ½ mile of existing road will be upgraded to handle heavy truck into this well location. Cuttings will be disposed of in the lined reserve pit. Drilling fluids will be trucked to a commercial SWD. Pit will be backfilled when dry. Location granted 150' topographic tolerance under Rule 36.22.702, No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: _Closest residences about 2 miles to the northeast from this location. The town of Rosco, Montana is about 5 miles to the northeast from this location. About 0.625 miles to the south and 2.75 miles west of this wellsite location is the Custer National Forest boundary.

Possibility of H2S: None, Jurassic Sundance Formation at total depth.

Size of rig/length of drilling time: _Double derrick or small triple derrick drilling rig/short amount of drilling time, estimate 10 to 15 days drilling time.

Mitigation:

_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Operational BOP and adequate surface casing should mitigate any problems. Distance to residences sufficient not to create a noise problem. No concerns.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: Custer National Forest boundary is about 0.625 miles to the south and 2.75 miles west of this wellsite location.
Creation of new access to wildlife habitat: No, all surface access is private land controlled. Existing access roads were constructed for previous oil wells.
Conflict with game range/refuge management: None. No game range/refuge nearby.
Threatened or endangered Species: Threatened or endangered species listed are the Canada Lynx, Black-footed Ferret and Grizzly Bear. Species of Concern are the Greater Sage Grouse, Sprague's Pipit, Wolverine and White-bark Pine for Stillwater and Carbon Counties on the Region 6 USFWS website. NH Tracker website lists five(5) species of concern: Wolverine, Hoary Bat, Canada Lynx, Fringed Myotis and the Grizzly Bear.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____

Comments: Private surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified.

Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____

Comments: Drilling location is on private surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns. Stratigraphic well.

Remarks or Special Concerns for this site

Well is a stratigraphic well test to be drilled to 6600' TD in the Jurassic Sundance Formation.

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts or cumulative effects are expected from the drilling of this test well. No long term impacts expected, since the drilling of this well would take a maximum of 20 days. Some short term impacts will occur, but can be mitigated in a short time.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: May 11, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center
(Name and Agency)
Stillwater and Carbon County water wells.
(subject discussed)

May 11, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Carbon County
(subject discussed)

May 11, 2012
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T6S R17E
(subject discussed)

May 11, 2012
(date)

If location was inspected before permit approval:

Inspection date: _May 10, 2012_____
Inspector: _Jerry Fraser_____
Others present during inspection: __ECA, Chris Henn, MTBOGC Steven Sasaki_____